

# What is happening to the wage earnings of ageing employees in Britain?

Mallier, T. and Morris, D.

Published version deposited in CURVE April 2012

## Original citation & hyperlink:

Mallier, T. and Morris, D. (2000). What is happening to the wage earnings of ageing employees in Britain? In D. Kantarelis (Ed). *Global Business and Economics Review - Anthology. Business and Economics Society International* (pp.78-90).

Copyright © and Moral Rights are retained by the author(s) and/ or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This item cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder(s). The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

**CURVE is the Institutional Repository for Coventry University**

<http://curve.coventry.ac.uk/open>

## WHAT IS HAPPENING TO THE WAGE EARNINGS OF AGEING EMPLOYEES IN BRITAIN ?

Tony Mallier & David Morris\*  
Coventry Business School, Coventry University, U.K.

### ABSTRACT

The objective of this paper is to examine the absolute and relative levels of the wage earnings of full-time male and female employees aged 50-64 years over time and to identify long term trends against the changing demand for, and supply of, older workers. Data from the New Earnings Survey, undertaken annually in Britain, are used to develop cross-sectional and time series models to examine the different, and changing, patterns of wage earnings for full-time ageing employees. The analysis of the data suggests ageing employees in full-time employment have benefited from rising monetary wages as a consequence of inflation and economic growth, although those benefits have been unevenly distributed between the sexes and occupations. Older females, on average, received higher real earnings in 1999 than in 1974. However, while older males experienced similar increases until the early 1990's they have not continued to benefit in the more recent period. The research findings suggest the changing patterns of wage earnings for ageing employees have not reflected their changing employment opportunities. Rather, the findings suggest institutional factors, the job and pay structures of organizations, remain sovereign in this area.

### I. INTRODUCTION

A contemporary characteristic found in older industrial nations is the extension of the average lifespan. Individuals are, on average, living longer than their forbears. Simultaneously the length of the working life for a significant number of males is in the process of decline, albeit this is not necessarily true at this point of time for females. Nevertheless, many in the 50-64 years age group exhibit a strong desire to prolong their contribution to society by remaining economically active and to earn a wage as an alternative, or an addition to receiving non-earned benefits. While the character of the opportunities existing for those wishing to remain in employment has been the subject of research, see for example Kodz et. al. (1999), the same degree of attention has not been given to the character of, and the influences on, the monetary rewards that ageing employees might anticipate from their continuing employment. A partial explanation for this situation arising is a consequence of the quality of the statistical data relating to wage earnings in Britain. Unlike other nations, for example the United States and Sweden, there is only limited statistical data on wage earnings publicly available and this data is of a highly aggregated and cross-sectional nature.

However, the data available does provide sufficient information to permit an examination of certain aspects of both the absolute and the relative levels of wages currently being received by ageing employees in Britain. Furthermore the data allows an examination over the longer term of the relative trends of the pay levels received by ageing employees during the last quarter of a century, a period when their employment opportunities have, relative to other groups of employees, undergone significant change.

The objective of this paper is to appraise certain characteristics of the wage earnings for those aged 50-64 years in full-time employment. In the next section, the environmental background of demographic and employment trends relating to ageing employees is examined. In the subsequent section those factors which are thought, by economists, to influence the pattern of wage earnings are identified as a pre-requisite to the penultimate section which will examine, and comment upon, the data relating to the earnings of ageing employees in Britain. In this section questions concerning both the absolute level of wages and the relative status of ageing employees to other groups will be examined. This will permit, in the concluding section, consideration to be given to the future.

## II. ENVIRONMENTAL BACKGROUND

Demographic and employment trends in Britain since 1971 have differed in significant ways from those occurring earlier in the 20th century and should current projections be fulfilled, it is anticipated the future will also differ from the recent past.

**TABLE 1** Working Age, Economically Active and Employed Population in Britain by age category and gender in '000's, 1971 and 1999.

Working Age Population:		1971	1999
Aged 20-64	Male	14,928	17,136
	Female	15,274	16,983
Aged 50-64	Male	4,592	4,503
	Female	5,017	4,616
Economically Active:			
Aged 20-64	Male	14,231	14,806
	Female	7,894	11,603
Aged 50-64	Male	4,278	3,236
	Female	2,312	2,377
In Employment:			
Aged 50-64	Male	4,013	2,960
	Female	2,207	2,285

Source: OPCS 1975 and Eurostat 1999.

In Great Britain, over the last quarter of a century, there has been a decline in the absolute and relative size of the 50-64 year age group in relation to both the total population and the population of working age. In 1999 the population of working age, defined here as the 20-64 year age group, was 13% higher than in 1971. However, for the older age group, 50-64 years, by 1999 there were by 5% fewer people in this age category than a generation previously. However, this trend will be reversed in the coming period with the ageing of the "baby boomers".

In practice, for numerous reasons, not all individuals of working age will at any one point of time be economically active, which is defined here as being either in employment, self-employed or unemployed (and actively seeking work). Estimates however suggest that among the 20-64 year category the numbers of economically active persons were twenty percent higher in 1999 than was the case in 1971. This increase reflects the near fifty percent rise in the numbers of females who were economically active in 1999 compared to the earlier date and the modest increase, 4%, in the number of economically active males. However, consideration of the data relating to the older age group suggests a rather different picture; by 1999 there was an estimated fifteen per cent decline in the number of the 50-64 year age group who were economically active than had been the case in 1971. This decline was a consequence of an estimated 25% reduction in the number of older males who were economically active by the latter date compared to 1971, although the number of economically active females is thought to have risen by 3% over the same period.

By 1999 not only were there fewer males aged 50-64 years than in 1971 but a declining proportion of them were in employment. This decline in male employment, which has coincided with economic recessions and industrial re-structuring, would appear to partially reflect the desire of some individuals to opt for early retirement, although others would appear to have been discouraged from seeking further employment, see Campbell (1999). Over the last generation not only have the number of males aged 50-64 years in employment declined by over twenty-five percent, those remaining in employment are increasingly employed in non-manual occupations. For females the trend does appear to be different, as relatively more older females have either entered and/or remained in employment, the number of females aged 50-64 years in employment being three percent higher in 1999 than in 1971. However, as with older males, the relative significance of non-manual employment for older females grew.

Over the long term demographic factors have influenced the age distribution of the potential and actual labour force, and as a consequence during the last thirty years the potential labour supply of older workers has declined absolutely and relatively in significance. Further, the proportion of older males who remain economically active in 1999 has been influenced by changes in the demand for their labour with the process of de-industrialisation and structural change within organizations leading to many older males leaving the labour force. Concurrent with these changes for males, the number of females in the older age group who are now participating in the labour market has increased. Whether, as Kleumarken (1993) suggests, demographic trends and changes in the supply of, and demand for, labour which are discussed above have significance on the earnings patterns of ageing employees will be considered in subsequent sections.

### **III. INFLUENCES DETERMINING WAGE LEVELS**

The basic underlying assumption of wage determination theory is that employers will continue to hire workers to the point where the value of the last worker's contribution to output, the marginal revenue product, would be equal to the cost of employing that worker. In simple terms the value to an organization of an individual's productivity is regarded as determining the level of wage the organization is willing to pay the individual. However, observation suggests that the wages actually paid by organizations are subject to institutional, legal and social constraints with the consequence that individuals do not necessarily receive a wage equal in value to their contribution to production.

There is, however, a second assumption, namely that the productivity of an individual will be influenced by their level of human capital accumulation and Johnson and Neumark (1996) attribute the variation of wages over the life cycle to the different levels of investment an individual has in depreciable human capital. As an individual's level of acquired human capital rises the value of their productivity is assumed to increase and hence their wage earnings will be correspondingly higher, over time though as an employee ages their previously acquired human capital will depreciate and result in a gradual decline in their wage.

**Human capital is assumed to consist of three elements:**

i) **Formal Education and Training.**

The formal education received by individuals, normally prior to their entry to employment, can, and does, vary greatly. At one extreme individuals may leave school with no formal qualifications upon reaching the statutory school leaving age while others proceed to higher education and obtain formal academic qualifications. Between these extremes there are numerous stages, some being identified in Table 2.

**TABLE 2** Average full-time net weekly earnings in £'s by qualification and age group in Britain, 1995.

Highest Qualification	Age in Years				
	20-29	30-39	40-49	50-59	60-64
First Degree	225	309	329	355	284
'A' level or equivalent	175	280	251	255	203
Apprentice Training	195	250	243	238	202
'O' level or equivalent	168	221	218	218	200
NO qualification	141	166	179	179	176

**Note:** 'O' and 'A' level examinations are normally taken while at school by sixteen and eighteen year old pupils respectively.

**Source:** derived from Labour Force Survey data, see Endnote.

From early in their working lives differentials in the level of earnings, reflecting different levels of formal education and training received by individuals may be observed in Table 2. This pattern of differentials, based on formal education and training continues throughout their working lives. In particular, Clark et.al (1978) considered the age of which an individual's income peaks varies with their education level. Normally the higher the education and/or skill level the later the peak is achieved.

ii) Employment Experience.

Formal education and training, while contributing to the accumulation of human capital, represent only one element; a second component reflects the experience gained over an individual's working life. It is assumed that over time individuals acquire, often informally, knowledge and skills which result in their becoming more productive. When considering formal education and training it was possible to identify specific levels of achievement and these may be related to the relevant wage levels. Similarly, it is possible to relate given wage levels to an individual's age when considering the consequence of employment experience on wages. It is assumed that the older the worker the greater the experience gained and hence the higher the wage received, an assumption confirmed in Table 2 above.

iii) Firm -specific Training.

Each employer is different, hence regardless of the level of an individual's initial education, training and previous employment experience there will be a need to familiarise new employees with the needs of a specific organization. Each organization, to differing degrees, will provide firm-specific training to ensure new employees become more effective within their new environment.

**TABLE 3** Average full-time net weekly earnings in £'s by qualification and length of employment for individuals aged 50-59 year in Britain, 1995.

Highest Qualification	Employment length with current employer	
	Under three years	Three years or more
First Degree	231	376
'A' level of equivalent	230	260
Apprentice Training	191	245
'O' level or equivalent	188	225
NO qualifications	149	183

**Note:** 'O' and 'A' level examinations are normally taken while at school by sixteen and eighteen year old pupils respectively.

**Source:** derived from Labour Force Survey data, see Endnote.

Once the firm-specific training has been provided the individual becomes more valuable to the organization and their subsequent wage will incorporate an element for this additional human capital; in the examples shown in Table 3 it may be observed the wages paid to individuals who have been employed for three years or more are above the level paid to employees with a shorter period of service (by over 50% on average for individuals with first degrees). This additional payment may also include a loyalty element, a payment to the individual to remain with the employer who would otherwise not only have to incur the expense of training a new employee but would simultaneously experience an output loss while firm specific training was provided. The effect of the above on the wage of an individual will be further influenced by other factors, for example personal characteristics, including age, and wider labour market features which could include occupational and industrial considerations.

#### IV. DISCUSSION

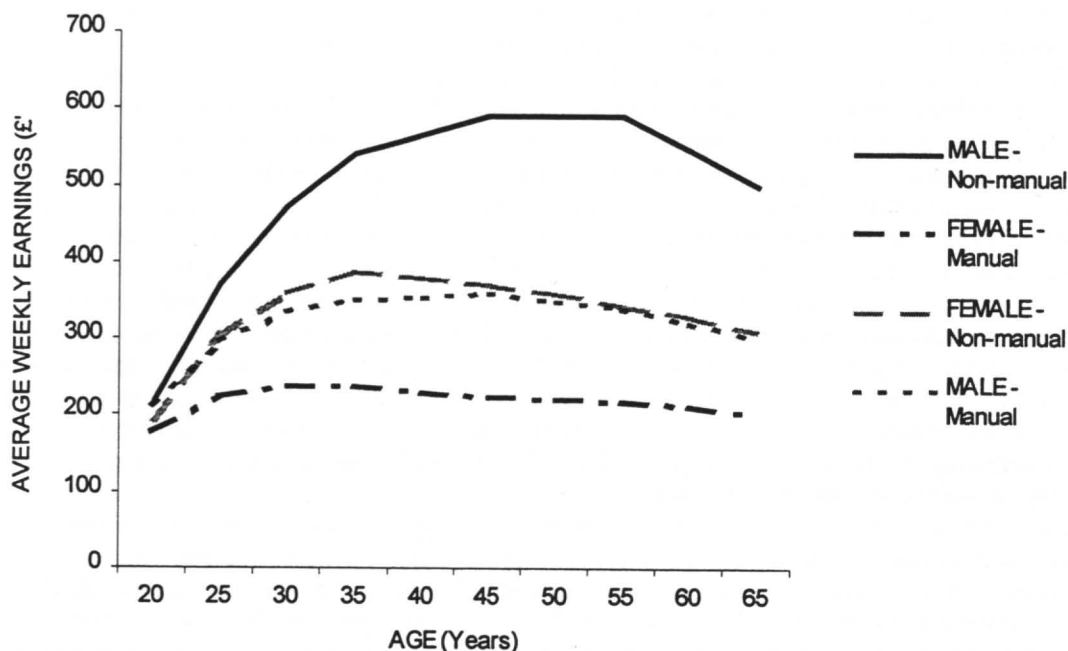
Dibben and Hibbert (1993) report that the government statisticians undertake a survey of earnings of employees in employment, the results being published in a New Earnings Survey (NES). The New Earnings Survey is an annual survey, conducted in April, of approximately 220,000 individuals representing 1% of the employees in employment. The sample frame used in the NES is derived from individuals with a National Insurance number ending with two specified digits. The employee's place of employment is identified by reference to the Inland Revenue current tax register records and a survey questionnaire, requesting information on age, gender, earnings, hours, industry and occupation, is sent to the employer for completion. Approximately three quarters of responses are obtained by this means while 'large' employers are required to provide information directly for their employees with the specified National Insurance number. Because individuals are selected on the basis of their unique National Insurance number they form a continuous panel of employees in employment, although the panel is constantly evolving as new individuals enter the labour market and others leave. However, while individuals may leave the panel should they re-enter employment they return to the panel. While the NES is just a sample of the employed population the results are considered to be representative of full-time adult employees whose earnings are above the income tax threshold of the relevant year. The information contained in the NES permits the construction of 'age-earnings' profiles.

The age-earnings profiles generated from the data and shown in Diagram 1 do not represent the earnings



history of any one individual, rather they represent an age-earnings profile based upon

**AVERAGE WEEKLY GROSS EARNINGS BY AGE, GENDER AND STATUS,  
1999 - DIAGRAM 1**



Source: derived from New Survey Part F, 1999.

information relating to a cross-section of differing cohorts and Campbell (1999) contends such data may offer an impression different to the one obtainable from time-series data. The profiles shown are based on aggregate data for males and females pursuing either manual or non-manual occupations and consequently represent the earnings of different individuals at a given point of time, (Disney, 1992). Clark et. al. (1978) noted, from US evidence, that over time that cross-sectional average earnings profile diagrams normally exhibit the same general configuration which McKay and Middleton (1998, p.21) thought revealed a 'hump-back' relationship between current earnings and age. This hump-back relationship implies that, in normal circumstances, an individual's earnings will peak some time prior to labour force withdrawal although this relationship would not necessarily imply an ageing employee's monetary wage earnings will decline. Observation of Diagram 1 further suggests the experience of females differs from males, not only are their recorded earnings significantly lower the peak in female earnings, whether for manual or non-manual wage earners, occur earlier in the life cycle. The earlier peak and the relative flatness of the manual female age-earning profiles, when compared to the corresponding male ones, has been attributed by Freeman (1979, p.291) to the intermittent employment experience of many females which has lead employers to regard younger and older females as being relatively close substitutes. Two general observations may be made from the Diagram; firstly, peak earnings in different occupations are achieved at different ages and, secondly, the data suggests monetary earnings for employees decline with age subsequent to those peaks.

While Horrell et. al. (1989) suggest ageing employees receive lower earnings because of the jobs they do, or because they receive unequal pay even after allowing for differences in jobs, there are a number of alternative explanations for the phenomena observed in Diagram 1. For example it has been suggested that younger male

manual workers are more willing to undertake overtime working, work shifts and use their physical strength to earn larger bonuses than older workers who may be constrained by declining physical abilities. While this may have been true for some industries in the past, recent NES data offers little support for such an explanation. Furthermore, with the decline of those industries and occupations which were reliant upon a worker's physical strength relative to new ones that are knowledge based, the potential relationship between age and productivity has become increasingly difficult to identify. There must also be doubts concerning the explanation offered to the House of Commons Employment Committee (1988) which suggested one reason for the overall decline in the average earnings received by non-manual males aged 60-64 years compared to the 50-59 age group was the fact that "higher paid professionals and related workers" retire earlier. Again there may be an element of truth in this proposition although it is questionable this explains the 15% difference observed in the gross weekly earnings for 1999.

The profiles in Diagram 1 are based on the wage earnings for different age cohorts, each cohort having been born and having entered the labour market at a different time compared to other ones. Phelps Brown (1977) expresses the view this may offer a partial explanation for the inverted curves with lower earnings levels being shown for older workers. His hypothesis is that over time not only have educational opportunities for individuals changed but so have the occupations and industries they are subsequently employed in. As a consequence of long run economic growth the earnings that each cohort receives upon entering employment will be higher than those received by the previous cohort, resulting in the earnings profiles moving outwards over time; thus over the long term the impression is created of declining earnings levels, for older groups relative to younger groups. In the long term Andrisani and Daymont (1987) believe the more rapid earnings and productivity growth will result in the earnings of younger cohorts eventually overtaking the less rapidly rising earnings and productivity of the older cohorts. Nevertheless, in this explanation the earnings of ageing employees do not actually decline in real terms although they do relative to other age groupings.

The differing experiences of cohorts entering the labour market provide two further alternative explanations for the decline in wage levels of ageing employees. Kleumarken (1993), using Swedish data, suggests that human capital theory provides not only an explanation for why different occupations receive different levels of earnings but also why those earnings may decline over the final period of an individual's employment. He suggests that in the same way that the value of physical capital assets in the production process decline over time, so will the value of human capital as the initial human capital investment in formal education and training will depreciate over a lifespan, and consequently that part of the wage which may be attributed to this initial investment will decline. Furthermore, when there is a period of technological change the initial investment in human capital may become irrelevant as the education and/or training of the individual becomes obsolete and thus the wage received for such investments will be adjusted downwards. The significant consideration here is the age and nature of the human capital investment initially acquired and not necessarily the age of the individuals, although in practice the cohort containing the ageing employees, who are the group least likely to receive additional training from their employers, will be the group who are most affected.

The above explanation implies that the wage which ageing employees receive may be lower than the wage they received earlier in their working lives reflecting a depreciation of their acquired human capital. The available data does not always substantiate this hypothesis, Carliner (1982) believes the reason being that the approach, subsequently developed by Kleumarken, takes insufficient account of the continuous rise in an economy's productivity over the long term. Thus whilst depreciation of individual human capital endowments are occurring there are simultaneously productivity gains within an economy which result in all the employed receiving higher wages. Filter et.al. (1996) suggest the existence of such productivity gains will result in the real wages received by individuals, after inflation is allowed for, increasing during the course of their working lives. The implication to be drawn from this is the real wages ought not to decline as a worker ages, which would be the case if the only factor to be considered was the depreciation of human capital, but rather the real wage an individual receives will continue to rise. Thus one explanation for the situation identified in Diagram 1 above, namely the apparent decline of the average gross weekly earnings level for older groups, is that the benefits of the economy's increased productivity, *ceteris paribus*, are not being shared equally between the different age cohorts, with the younger cohorts normally gaining the greater financial benefit from the continuing rise in a nation's productivity.

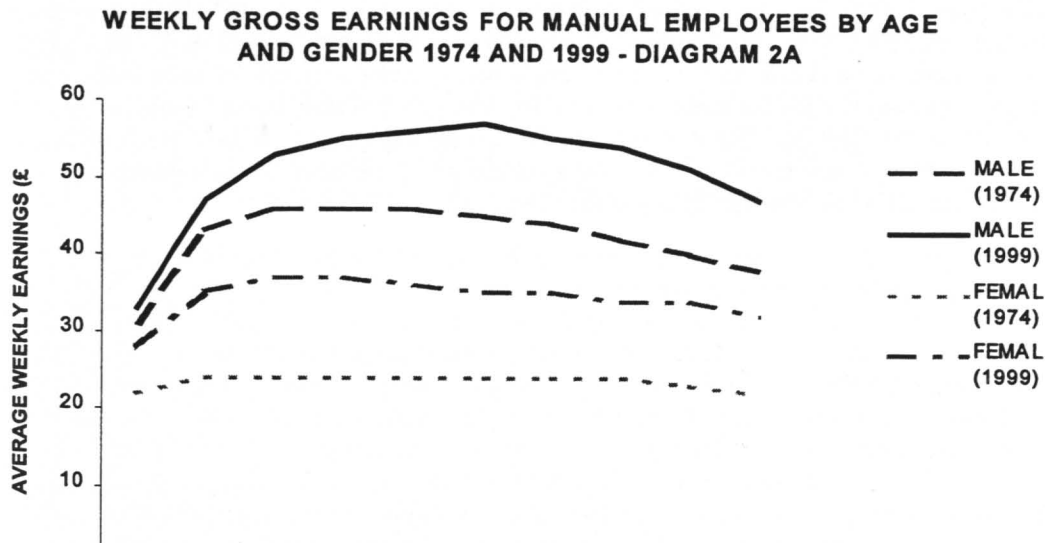
In Diagrams 2a and 2b the relevant data from the NES for 1974 and 1999 has been used to develop wage profiles for these two years, Diagram 2a presents profiles for male and female manual workers while in Diagram 2b profiles for non-manual workers are given. Over the twenty-five year period retail prices, measured by the Retail



Price Index, rose from 100 in April 1974 to 631 in April 1999. Therefore, if account is to be taken of price inflation, it is necessary to deflate the 1999 wage figures to enable the identification of changes in the level of 'real' wage earnings between the two years. Further, when considering the wage profiles in Diagram 2 it is important to recall that these profiles do not represent the earnings history for an individual but are based upon the average gross weekly earnings for specified age groups in each of the two years.

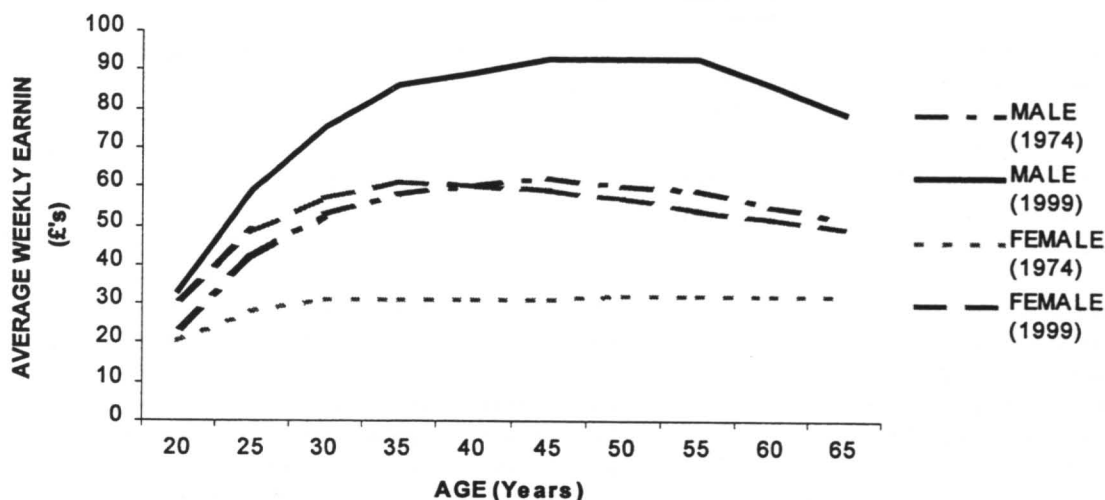
A consistent pattern emerges when the profiles in Diagram 2 representing the "real" earnings levels in 1999 are compared with those in the base year, namely the profiles for 1999 indicate higher real wages were being received by individuals at every age level with the 1999 profiles having moved outwards. While it is assumed the increase at each wage level can be attributed to increases in productivity across the nation's economy two general observations may be made when considering the profiles presented in Diagram 2. Firstly, while the average level of real wage earnings for all males over 21 years rose by 48%, there was a greater increase, 88%, for females over 21 years as a consequence of both institutional factors, equal pay for equal work legislation, and changes in female labour demand vis-a-vis that for males. Secondly, the increase in wage earnings for all non-manual employees, 71%, was significantly higher than the 25% for manual workers, this differential increase may be seen as reflecting the changing levels of demand for these two classes of worker. Thus the distribution of the benefits of rising productivity were uneven with non-manual and female employees receiving the greater benefits.

What is also of significance is that in each of the four classes of employee identified the increased benefits received vary with age, the older male age groups, aged 45 years and over, experienced higher percentage increases in their real earnings levels than younger males. However, amongst females the reverse occurred, albeit the percentage increases for both manual and non-manual ageing female employees were generally higher than the percentage increases experienced by manual and non-manual male employees of the same age. Thus for males classified as non-manual there was, on average, a 58% increase in the real wage level between 1974 and 1999 for those aged 50-59 years, the 60-64 grouping experiencing a 52% growth, while the corresponding increases received by non-manual females were 69% and 53%. Similarly, for female manual occupations the comparable increases for the 50-59 and 60-64 year age groups were 48% and 45% while male manual workers experienced increases of 28% and 24% respectively. In 1999, when compared with 1974, real wages had increased for each age grouping however those increases varied according to age, gender and broad occupational groupings



Source: derived from New Earnings Survey Part F, 1974 and 1999

**WEEKLY GROSS EARNINGS FOR NON-MANUAL  
EMPLOYEES BY AGE GENDER 1974 AND 1999 - DIAGRAM 2B**



These findings are consistent with those of the earlier study by Creedy and Hart (1979) who used longitudinal data to undertake a comparison of the earnings experience of successive cohorts. Their analysis caused them to conclude that productivity growth in the economy resulted in the earnings profiles of successive cohorts of individuals being consistently higher than the profiles of preceding cohorts. However, Creedy and Hart further noted that older workers in each cohort received smaller increases than younger workers and while this conclusion reflects the findings above relating to females the pattern which has emerged for males is contrary to their findings.

The indications point to successive cohorts progressively experiencing increased real earnings levels, for example an individual aged 50-59 years in a non-manual occupation would in 1999 be receiving a higher real wage than someone of the same age a decade earlier. This comparison is between groups of individuals who are in different birth cohorts and leaves open the question of what happens to individuals within cohorts as they age. It was noted earlier that the NES sampling frame is constant, the data relating to the same individuals wage earnings are collected annually. This feature therefore allows for a comparison to be made of the average wage earnings being received by individuals within specific cohorts as the cohort ages.

**TABLE 4** Real average gross weekly earnings in £'s for full-time employees for specific age cohorts over time by gender and employment status.

Sex, status and Year of Birth	Cohort Age in Years		
	40-44	50-54	60-64
<b>Male: manual</b>			
1925 – 1929	26.9	30.8	32.2
1930 – 1934	45.2	45.5	45.6
1935 – 1939	97.6	105.6	98.4
<b>Male: non-manual</b>			
1925 – 1929	35.6	40.9	48.5
1930 – 1934	61.6	67.7	69.9
1935 – 1939	126.3	168.5	162.3
<b>Female: manual</b>			
1925 – 1929	12.9	18.8	20.6
1930 – 1934	23.9	27.9	29.7
1935 – 1939	56.2	64.7	67.2
<b>Female: non-manual</b>			
1925 – 1929	17.3	24.1	31.2
1930 – 1934	30.7	39.9	45.4
1935 – 1939	72.4	98.4	101.3

**Note:** The wage earnings shown for 40-44 year age groups are actual earnings, those shown for 50-54 and 60-64 year age groups have been adjusted for changes in the Retail Price Index.

**Source:** derived from New Earnings Survey: various years.

This exercise has been undertaken in Table 4 which seeks to relate the *real* average gross weekly earnings for specific age cohorts over time, given that inflationary pressures will generally have resulted in monetary earnings increasing. The earnings data for 1979, 1984, 1989 etc., has been corrected to allow for the inflationary element and then, for each of the age cohorts identified, the earnings are compared over time, for example the earnings for those born between 1935-1939 will be aged between 50-54 years in 1989 and are compared with the earnings received ten years earlier when they were aged 40-44 years. The picture that emerges from the information in Table 4 would seem to show that individuals, regardless of sex and employment status, who were aged 40-44 could anticipate receiving a higher level of real earnings ten years later. However, the increases received as a result of growth in the economy, varied between gender and occupational grouping. For example while the average male aged 50-54 years in a manual occupation received gross weekly earnings in 1989 that were 8% higher than those received ten years earlier when aged 40-44 years, females in non-manual occupations benefited from a 36% rise in real income.

For ageing employees beyond the age of 60 years the position is more complex with contrasting experiences between males and females. The indications are that in 1999 the average gross weekly earnings received by males aged 60-64 years were lower, in real terms, than they had received a decade before, when aged 50-54 years, with manual employees experiencing the sharpest decline. This finding does not preclude the possibility that some males in some occupations who were over sixty years old in 1999 did receive a higher average wage than ten years earlier, but the average male born between 1935 and 1939 who remained in employment, although not necessarily with his career employer, whether in a manual or non-manual occupation would have experienced a fall in their real wages. For females the estimates suggest those aged 60-64 years, who remained in employment, did experience an increase which was influenced by the occupation they were employed in.

In absolute terms both the monetary and average real wages rose by differing sums between 1974 and 1999 for all those aged 50-54 years who remained in full-time employment. Beyond the age of sixty the picture is less clear, while monetary wages continued to rise, reflecting inflationary pressures, on average the real wage received

by males began to decline from the mid-1990's onwards while continuing to rise for females.

The real wages of ageing employees do not necessarily decline with age and where a decline is observed this may, as Johnson and Neumark (1996) suggest, reflect "biases attributable to factors other than the depreciation of human capital" (p.745); for example ageing employees may reduce their work hours and/or partially retire into a bridge job. Doeringer (1990) reported ageing employees seeking bridge employment normally left their 'career' occupations and industries and experienced a consequential reduction in their earnings, Campbell (1999) suggesting this would, on average, be of the order of ten percent.

## V. CONCLUSION

The three decades since 1971 have experienced unprecedented changes in the demographic and employment fortunes of those aged between 50 and 64 years. While the size of the population in this age group has declined both absolutely and relatively there has also been a simultaneous decline in the proportion of males who have remained in the labour force although the number of females economically active has risen over the same period. These population and employment changes provide a background against which the wage earnings of ageing employees have been considered. All workers aged 50-64 years appear to have benefited from rising wages as a consequence of the nation's improved economic performance, although the benefits have been distributed in an uneven fashion. When allowance is made for inflation over the period 1974-1999, it was found that on average females in both occupational groups, despite their being older, were receiving higher real earnings in 1999 than in earlier years. While the same was true for males aged 50-54 years in 1999 this was not necessarily the case for those males aged 60-64 years in 1999. Over the previous decade they, on average, did experience a decline in their real wage levels.

The findings relating to the movements of both the absolute and relative earnings levels do not appear to necessarily relate directly to what has taken place in the labour market for older people. The declining number of economically active older males appears to be neither a response to falling real wages nor to have resulted in an increase in earnings to halt the decline. Similarly, the movement and trends in female earnings appear broadly in line with those of males although for older females the economic activity rates have been rising.

The above findings would suggest that rather than the external labour market determining the wage levels for ageing employees it would appear institutional factors, that is the job and pay structures of organizations, remain largely sovereign in this area. Where an employer considers the individual is able to undertake the relevant job tasks the individual receives the agreed rate of pay for those tasks. Where the employee is considered unsatisfactory, that is as a consequence of age they lack the education and/or a perceived ability to adapt to new requirements, then the mechanism would appear to be to offer early retirement or voluntary redundancy on health grounds and not to retain the individual in employment at a lower wage. However, should an ageing employee seek new employment, it is anticipated that they will receive a lower wage reflecting the foregoing of previously acquired firm specific training. The future, which may already be with us, offers a different scenario. There will be fewer young people available and willing to enter employment and the employment opportunities for the next generation of older workers, the former baby boomers, are expected to increase. A similar future has been anticipated in the United States, and in their study of the US labour market, where there will also be an increasing number of ageing employees seeking employment, Levine and Mitchell (1988) predict their wages will rise in real terms. While, because of data constraints, a similar study is not possible for Britain there appears to be no reason to anticipate a different outcome.

\* We gratefully acknowledge the helpful comments of the reviewer and discussant of this paper.

## ENDNOTE

Material from the Quarterly Labour Force Survey is Crown copyright; it has been made available from the Office of National Statistics through the Data Archive and has been used by permission. Neither the ONS nor the Data Archive bear any responsibility for the analysis or interpretation of the data reported here.

## REFERENCES

- Andrisani, P. and T. Daymont, "Age changes in Productivity and Earnings among Managers and Professionals" in Sandell, S.H. (ed), *The Problem Isn't Age: Work and Older Americans*, (New York, Praeger, 1987)
- Blanchet, D., "Does an ageing labour force call for adjustments in training or wage policies" in Johnson, P. and K.F. Zimmerman (ed). *Labour Markets in an Ageing Europe* (Cambridge, Cambridge University Press, 1993)
- Campbell, N., *The Decline in Employment Among Older People in Britain*, (London, Centre for Analysis of Social Exclusion: LSE, 1999)
- Carliner, G., "The wages of older men", *Journal of Human Resources*, Vol. 17, No.1, 1982, pp.25-38.
- Clark, R., Kreps, J. and J. Spengler, "Economics of Ageing: a Survey". *Journal of Economic Literature*, Vol. 16, No.3, 1978, pp.919-962.
- Clark, R.L., "Ageing and relative earnings" in Sandell, S.H. (ed), *The Problem Isn't Work: Age and Older Americans*, (New York, Praeger, 1987)
- Creedy, J. and P. Hart, "Age and the distribution of earnings", *Economic Journal*, Vol. 89, No 2, 1979, pp.280-293.
- Dibben, J. and A. Hibbert, "Older workers: an overview of recent research", *Employment Gazette*, Vol. 101, No.3, 1993, pp.237-250
- Dickens, R., *The Evolution of Individual Male Earnings in Great Britain: 1975-94* (London, Centre for Economic Performance: LSE, 1996)
- Disney, R., "The structure of pay" in Creedy, J. and B. Thomas (ed), *The Economics of Labour*, (London, Butterworths, 1982)
- Doeringer, P.B., "Economic security, Labor Market Flexibility and Bridges to Retirement" in Doeringer, P.B. (ed), *Bridges to Retirement*, (Ithaca NY, ILR Press, 1990)
- Filter, R.K., Hamermesh, D.S. and A.E. Rees, *The Economics of Work and Pay*, (6th edition) (New York, Harper Collins College Publishers, 1996)
- Freeman, R., "The effect of demographic factors on age-earnings profiles" *Journal of Human Resources*, Vol. 14, No.3, 1979, pp.289-318.
- Gosling, A., Machin, S. and C. Meghir, *The Changing Distribution of Male Wages in the UK* (London, Centre for Economic Performance: LSE, 1996)
- Horrell, S., Rubery, J. and B. Burchell, "Unequal jobs or unequal pay", *Industrial Relations Journal*, Vol. 20, No.3, 1989, pp.176-191.



House of Commons Employment Committee, *The Employment Patterns of the Over 50's: Minutes of Evidence*, (7th December), (London, HMSO, 1988)

Johnson, R.W. and D. Neumark, "Wage declines among older men", *Review of Economics and Statistics*, Vol. 78, No.4, 1996, pp.740-748.

Kleumarken, N.A., "On ageing and earnings" in Johnson, P. and K.F. Zimmerman, (ed), *Labour Markets in an Ageing Europe*, (Cambridge, Cambridge University Press, 1993)

Kodz, J., Kersley, B. and P. Bates, *The Fifties Revival*, (Brighton, The Institute For Employment Studies, 1999)

Kreps, J.M., (ed), *Lifetime Allocation of Work and Income*, (Durham, N.C., Duke University Press, 1971)

Levine, P.B. and O. Mitchell, *The Baby Boom's Legacy: Relative Wages in the 21<sup>st</sup>. Century*, (Washington D.C., National Bureau for Economic Research, 1988)

McKay, S. and S. Middleton, *Characteristics of Older Workers: Secondary Analysis of the Family and Working Lives Survey*, (London, HMSO, 1998)

Office of National Statistics, *New Earnings Survey: Part F*, (London, Office of National Statistics, 1999)

OPCS, *Census 1971 Great Britain: Economic Activity Part IV*, (London, HMSO, 1974)

Phelps Brown, E.H., *The Inequality of Pay*, (Oxford, Oxford University Press, 1977)

Pilcher, J., "Transitions to and from the Labour Market: Younger and Older People in Employment", *Work, Employment and Society*, Vol. 10, No.1, 1996, pp.161-173.

Schmitt, J., "The changing structure of male earnings in Britain 1974-1988", in Freeman, R.B. and L.F. Katz (ed), *Differences and Changes in Wage Structure*, (Chicago, University of Chicago Press, 1995)